



Evaluation of a standardized morbidity surveillance form for use during disasters caused by natural hazards

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Abstract:

INTRODUCTION: Surveillance for health outcomes is critical for rapid responses and timely prevention of disaster-related illnesses and injuries after a disaster-causing event. The Disaster Surveillance Workgroup (DSWG) of the US Centers for Disease Control and Prevention developed a standardized, single-page, morbidity surveillance form, called the Natural Disaster Morbidity Surveillance Individual Form (Morbidity Surveillance Form), to describe the distribution of injuries and illnesses, detect outbreaks, and guide timely interventions during a disaster. **PROBLEM:** Traditional data sources can be used during a disaster; however, supplemental active surveillance may be required because traditional systems often are disrupted, and many persons will seek care outside of typical acute care settings. Generally, these alternative settings lack health surveillance and reporting protocols. The need for standardized data collection was demonstrated during Hurricane Katrina, as the multiple surveillance instruments that were developed and deployed led to varied and uncoordinated data collection methods, analyses, and morbidity data reporting. Active, post-event surveillance of affected populations is critical for rapid responses to minimize and prevent morbidity and mortality, allocate resources, and target public health messaging. **METHODS:** The CDC and the Georgia Department of Public Health (GDPH) conducted a study to evaluate a Morbidity Surveillance Form to determine its ability to capture clinical presentations. The form was completed for each patient evaluated in an emergency department (ED) during triage from 01 August, 2007 through 07 August, 2007. Data from the form were compared with the ED discharge diagnoses from electronic medical records, and kappa statistics were calculated to assess agreement. **RESULTS:** Nine hundred forty-nine patients were evaluated, 41% were male and 57% were Caucasian. According to the forms, the most common reasons for seeking treatment were acute illness, other (29%); pain (12%); and gastrointestinal illness (8%). The frequency of agreement between discharge diagnoses and the form ranged from 3 to 100%. Kappa values ranged from 0.23-1.0, with nine of the 12 categories having very good or good agreement. **CONCLUSION:** With modifications to increase sensitivity for capturing certain clinical presentations, the Morbidity Surveillance Form can be a useful tool for capturing data needed to guide public health interventions during a disaster. A validated collection instrument for a post-disaster event facilitates rapid and standardized comparison and aggregation of data across multiple jurisdictions, thus, improving the coordination, timeliness, and accuracy of public health responses. The DSWG revised the Morbidity Surveillance Form based on information from this study.

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Resource Description

Climate Change and Human Health Literature Portal

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change;
surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Health Professional, Public

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event

Extreme Weather Event: Hurricanes/Cyclones

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Injury, Mental Health/Stress

Mental Health Effect/Stress: Stress Disorder

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Medical Community Engagement:

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Climate Change and Human Health Literature Portal

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status, Pregnant Women, Racial/Ethnic Subgroup

Other Racial/Ethnic Subgroup: Not specified

Resource Type:

format or standard characteristic of resource

Research Article, Research Article

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content